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ABSTRACT

Twenty-five near native speakers of a second language (L2) were interviewed about the linguistic, sociological, psychological, and emotional reasons involved in the process of fossilization in foreign language learning. All of the subjects considered that their command of the target language was not as good as a native speaker's of that target language in many areas; however, they all agreed that their command of the target language was adequate for their professional and communication needs. Results also suggest that: fossilization can be conscious; it is not experienced as a problem by individuals; it is deeply connected to the idea of purpose; it can be determined by personal characteristics; it is deeply related to psychosocial factors; it is changeable and unpredictable; and it is difficult to eradicate (Contains 24 references.) (Author/JP)

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THE PROCESS OF FOSSILIZATION IN INTERLANGUAGE

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THE PROCESS OF FOSSILIZATION IN INTERLANGUAGE.
The barrier between near-native and native competence: individual and social factors.

The principal aim of this paper is to try to analyse the foundations and possible implications of fossilization in foreign language learning. For this purpose, 25 subjects, all of them proved to be near native speakers of an L2, were asked to be interviewed about several topics which included elements of self-analysis of the linguistic, sociological, psychological and emotional reasons involved in the process of fossilization in foreign language learning.
The results and subsequent analyses of these tests suggest that fossilization can be conscious, it is not experienced as a problem by individuals, it is deeply connected to the idea of purpose, it can be determined by personal characteristics, it is deeply related to psycho-social factors, it is changeable, difficult to eradicate and unpredictable.

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An important characteristic that can be observed in the study of the interlanguage of second and foreign language learners is the fact that some language features that are part of the learners' interlanguage and differ from the correct or more adequate target language form do not seem to follow any kind of progression towards proficiency in the target language but quite the opposite: These interlanguage forms seem to be used by language learners in spite of their theoretical capacity (both linguistic and intellectual) to include the right target language form in their interlanguage repertoire.

This phenomenon of certain linguistic features becoming fixed in some, or I would dare say, most learners' interlanguage has been referred to in the literature, after Selinker (1972) as fossilization, terminology that we will also adopt in this paper.

Background

The possible implications of the study of fossilization to second language learning and teaching.

As far as language learning is concerned, we can observe that one of the elements of the final outcome that learners can produce is precisely fossilization (Skehan ,1989).

Specifically, the classroom and materials, the social context, the opportunities for target language use, the learner and the process of learning itself can be some of the sources for fossilization, but they are not the only ones as we will see.

What follows from this is that the presence or absence of fossilization can give us very important insights into many different aspects of learning a language.

As far as teaching is concerned, Stern (1983) points out the fact that the interlanguage in many instances is too fossilized, too idiosyncratic, and does not move reliably through better and better approximations towards target language norms. In this case, from the point of view of

teaching a foreign language, a sound knowledge of the foundations of fossilization appears to be necessary, as well as of the factors and situations that can cause its occurrence. For this purpose, we will analyse the roles of prediction, eradication and remedial treatment together with their implications for the teaching situation.

Having considered the potential information about language learning that fossilizations can provide, it would be interesting to define what is understood by fossilization but before that we would like to approach what has been said about the psychological processes that underlie its configuration.

The psychological processes that underlie fossilization

It was Selinker again in 1972 that tried to give a psychological explanation of fossilization within his theory of interlanguage.

He assumes that there exists a latent psychological structure in the brain which is activated whenever one attempts to learn a foreign language.

This latent psychological structure would exist in addition to what Lenneberg (1967) termed latent language structure whose main features are:

a. It is an already formulated arrangement in the brain.

b. It is the biological counterpart to universal grammar.

c. It is transformed by the infant into the realized structure of a particular grammar in accordance with certain maturational stages.

But according to Selinker (1972) this latent language structure which Lenneberg describes is only reactivated by that small percentage of learners -which he evaluates to be a mere 5%- who manage to achieve native-speaker competence.

What follows from this is that the majority of language learners, the ones who fail to attain native-like command of the foreign language go through a different process, that's

to say, they activate that latent psychological structure which Selinker defined.

This latent psychological structure differs from Lenneberg's latent language structure in several points:

-there is no genetic timetable

-there is no direct counterpart to any grammatical concept such as "universal grammar"

-there is no guarantee that the latent psychological structure will be axctivated at all

-there is no guarantee that the latent structure will be "realized" into the actual structure of any natural language

-and there is every possibility that an overlapping exists between this latent language acquisition structure and other intellectual structures.

To sum up, as far as language learning is concerned, Selinker considers that the human brain has got two well differentiated latent structures:

1.the latent language structure and

2.the latent psychological structure.

Those who manage to reactivate the former will eventually achieve native-speaker competence. For the rest of learners who, on the contrary, fail to activate this language structure, the possibilities, according to Selinker, of attaining native -like command of the language they are in the process of learning are minimal.

So, what is the relationship of these latent structures and fossilization?

As I think can be inferred from the previous considerations, the reactivation of the latent language structure will lead to proficiency, whilst the activation of the latent psychological structure will result in fossilization.

latent language structure----------proficiency

latent psychological structure----------fossilization

In this way, fossilization is defined by Selinker as a mechanism which is assumed to exist in the latent

psychological structure we have just described. He goes on to say that fossilizable linguistic phenomena are linguistic items, rules, and subsystems which speakers of a particular native language will tend to keep in their interlanguage relative to a particular target language, regardless of their age or of the amount of explanation and instruction they receive in the target language.

It is not the purpose of this paper to discuss Selinker's assumptions concerning the structures that can be reactivated or not, but rather to try to see what makes learners go through different psychological processes should they exist.

This leads us to consider the reason WHY many learners stop progressing in their acquisition of the target language and WHY some kind of errors tend to persist in their interlanguage. To put it in Stern's words, "why many learners become arrested at certain interlanguage levels and why there should be a fossilization of error patterns" (1983,p.410). So, although most of the research that has been conducted in the field of fossilization in interlanguage has dealt with fossilized errors, it is the main purpose of this paper to approach the subject from the point of view of the lack of progression towards the target language, something that could hopefully give us a better understanding of the whole process.

But before coming to this question I think it would prove very useful to briefly consider the processes that produce fossilization.

Processes that can produce fossilization

According to Selinker (1972) fossilization phenomena appear through five central processes that characterize foreign language learning:

If it can be experimentally demonstrated that fossilizable items, rules and subsystems which occur in IL performance are a result of the NL, then we are dealing with the process of *language transfer*. For many authors such as

Sheen (1973), Littlewood (1985) or Mukattash (1986), the errors due to language transfer tend to be fossilized in a higher proportion than other types of errors.

If these fossilizable items, rules and subsystems are a result of identifiable items in training procedures, we are dealing with *transfer of training*.

If these fossilized forms are a result of an identifiable approach by the learner to the material to be learned, then we are dealing with *strategies of second language learning*.

If they are the result of an identifiable approach by the learner to communication with native speakers of the TL, then we are dealing with *strategies of second language communication*. Concerning this latter point, it has been suggested that some communication strategies are more likely to produce fossilization than others. This is precisely the case with simplification.

Finally, if they are a result of a inappropriate application of target language rules and semantic features, then we are dealing with the *overgeneralization of target language linguistic material*.

Selinker concludes that combinations of these processes produce entirely fossilized IL competence. Again, although we do not pretend to question the importance of these processes, we also believe that there are very important individual and social factors which underlie the whole process of foreign language learning.

Individual and social factors in fossilization

The reason we mention both individual and social factors is due to the fact that not only do individuals fossilize but also whole groups of individuals as well. As far as groups are concerned, Nemser (1974) points out that we can distinguish basically two kinds of stable varieties of IL. One of them is found in immigrant speech, that is the speech of long-time users of the target language, who, often having attained considerable fluency in this language, have

nonetheless yet obviously reached a plateau in their learning.

The other group is formed by what Nemser calls utility systems. They are "little" languages of limited semantic function that require limited grammars and lexicons, as the systems often used by taxi-drivers, hotel-reservation clerks, bartenders and other groups with frequent but circumscribed requirements in communicating with foreigners.

This common fossilized interlanguage shared by a group, is related to the theories of pidginization and creolization which, although there are not the purpose of our paper, can indeed contribute to the better understanding of this phenomenon. (For an interesting account of the relationship between second language acquisition and pidginization and creolization, see Valdman, 1978 and 1983).

What then are the causes of fossilization and the features of these individual and social factors?

The Study

Subjects and method

For the purpose of analysing the possible causes of fossilization and the factors that can produce it, we selected a group of 25 near native speakers of a foreign language, from different language backgrounds and sharing the common features of

-a university degree in the foreign language,

-former residence in the foreign language country sometime in the past, though now established in some other country,

-and finally, a need of the foreign language in their profession, as most of them are qualified foreign language teachers.

According to James (1986) , this group would constitute what he calls a second language élite: that's to say, the minority that will need to proceed beyond the IL.

So it was our aim to see what this group of learners thought about their own command of the target language and

which their feelings were concerning the different factors which are supposed to play an important role in interlanguage and fossilization.

Information was gathered through the use of introspective techniques based on a set of of questions and topics which the individuals answered and commented in interviews.

Discussion and results

One of the most interesting ideas that derive from this study is the fact that all the subjects considered that their command of the target language was not as good as a native speaker's of that target language in many different areas. They quoted for instance intonation, pronunciation, vocabulary, set expressions and fluency, and more interestingly, they also thought that their interlanguage had somehow stopped progressing in many different aspects in the last few years. Some people mentioned that they found they were only progressing if at all, in the area of the terminology and forms most strongly related to the teaching or professional situation. So, as we can see, according to the individuals'own perception of their IL, this has become fossilized.

However, the other question in which they all agreed is that their command of the target language is definetely enough both for their profession and for their communication needs.

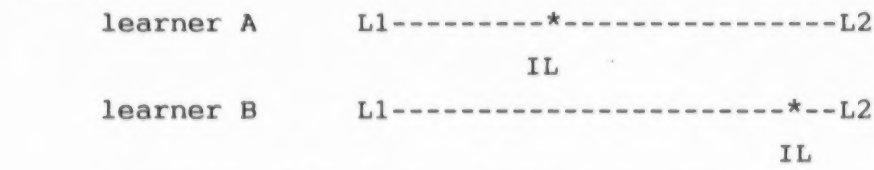
This last remark brings about a question which I think is fundamental if we are to understand the process of fossilization in interlanguage: the notion of PURPOSE.

Purpose

The fact that an individual stops progressing towards the target language in a particular moment of the development of his/her interlanguage and not in another is deeply connected to this individual's purposes. Pit Corder (1981) is very precise in this matter and suggests that when the learner's interlanguage grammar reaches that state of

elaboration which enables him to communicate adequately for his purposes with native speakers, his motive to improve his knowledge or elaborate his approximative system disappears, resulting in fossilization.

In this way a learner we will call A with limited communicative, social and professional needs (for instance the hotel receptionist we mentioned before) will halt the progression of his interlanguage earlier than learner B, whose communicative, social and professional requirements are more demanding (for instance, in our group of near native speakers): The difference can be represented graphically like this,



Together with this, there are some other factors that can play a significant role in the whole process of fossilization. Although our main concern deals with factors that have a psychological and social background, it can be very interesting to mention also other factors that have been referred to in the literature and which are supposed to influence the tendency to fossilization:

Personal features

We can distinguish personal features which can affect fossilization in the following ways:

Cognitive style: Following the studies of Naiman et al (1978), Brown (1980) and Skehan (1989), we can point out that from a cognitive point of view, one can distinguish between field dependent and field independent individuals. Although originally this was a distinction derived from studies of psychology, more precisely from the field of perception, it has also been related to language learning. Put briefly, field dependent learners are more inclined to interpersonal situations, wanting contact with other people, and engaging in verbal interaction with them. This should be benefitial

for exposure to language and therefore language development through interaction. On the other hand, field independent individuals are supposed to have greater analytic and cognitive restructuring capabilities. And more importantly for our purposes, field independts seem to be more resistant to fossilization and show a better capacity to restructure and develop interlanguage systems more readily (Skehan 1989, p.112).

Secondly, the role of risk-taking has been considered to be, from the point of view of foreign language learning, generally and pervasively good. Concerning the matter of our paper, it has been suggested that adventurous learners are more likely to change and also more resistant to fossilization.

Finally it should also be mentioned within this description of cognitive and personality factors, that it has been shown that there is no relationship at all between intellectual capacities and fossilization.

Age of arrival. Input and output

Another group of factors such as age of arrival in the foreign language country and intentions of integration with that country and foreign language community can also play a very important role as regards fossilization.

Taking into account now our group of learners, when they were asked about what they thought to be the causes of their fossilization, they were agreed in considering that the fact of living in another country and the limited opportunities for using the foreign language that this implies, was the main reason for fossilization. Indeed, there are grounds to believe that input can play a very important role in the context of second language acquisition (Gass and Madden, 1985). Some authors such as McLaughlin (1987) have pointed out the implications that restricted input can have for fossilization. However nothing is said about restricted output, which can be as important as input. For the uses of

output, Swain (1986) offers an interesting account of the opportunities for language learning it provides.

But again the role of the restricted input and output is not conclusive as some learners pointed out that they had also had the feeling of being fossilized even when they were living in the country and had constant contacts with the language and the community. This idea coincides with the one expressed by Corder (1981) who estates that a learner's interlanguage ceases to develop however long he remains exposed to authentic data in the target language.

Psychological and social dimension of fossilization

Turning now to the psychological and social dimention of fossilization we find that it is a question that writers and researchers pay special attention to nowadays.

These social and psychological factors have been found to significantly determine the level of success in learning the target language. A very interesting -although disputable- view relating to this is the idea of acculturation.

Within this perspective, fossilization is thought to occur in naturalistic adult second language acquisition because of a combination of social and psychological factors relating to acculturation.

The importance of this concept has been emphasized by Schumann (1976, 1978) who considers that acculturation and hence SLA is determined by the degree of social and psychological "distance" between the learner and the target language culture.

Social distance pertains to the individual as a member of a social group that is in contact with another social group whose members speak a different language. Factors such as domination versus subordination or attitude are considered to be of great significance.

On the other hand, psychological distance is the result of various affective factors that concern the learner as an individual, such as ego permeability or integrative versus

instrumental motivation. Schumann (1978) concludes that learners who do not acculturate will become fossilized.

Motivation

In this way, motivation, or more precisely, the orientation of motivation can be considered to be fundamental for the tendency to fossilization.

Starting from Gardner and Lambert's (1972) distinction between instrumental motivation -based on the advantages that can accrue if a language is known- and integrative motivation -related to the desire to understand the foreign language culture and participate in it, some authors have assumed that those learners with an integrative orientation are more resistant to fossilization.

In connection with this, Meisel (1980) proposed a distinction concerning the socio-psychological orientation of learners who can show either a segregative or integrative orientation depending on how favourable they are to speakers of the target language. As before, the segregative learner is more likely to fossilize than the integrative.

Turning now again to our group of subjects, we found that their feelings and opinions about their level of motivation and their attitude towards the foreign language community are varied and based upon personal and circumstancial features very difficult to generalize, although they all felt, for different reasons, they were experincing a low level of motivation right at the moment.

But, very importantly, when asked about the possible changing nature of these factors, something that as McLaughlin (1987) points out has been neglected in the literature, all of them considered that their motivation and attitude had experienced constant changes during the learning process. Even more, they could all refer to the moments or periods when they felt more or less motivated, the type of motivation that used to predominate and the changing nature of their attitude towards the foreign language community, which showed

a positive progression during the learning process in some cases and a negative one in others.

Perhaps it would be useful to note that there were two variables mentioned by all the subjects concerning the moments they felt more motivated and willing to learn the foreign language.

These were:

-The years when they studied the language at the university and

-Some stays in the foreign country in which they had enjoyed themselves.

On the other hand the moments they considered their interest decreased were related to their feeling of having attained the required command for their needs.

This question of the changing nature of motivation and attitude and the ideas of needs connected with that one of purposes we mentioned before, can lead us to consider the question of variation in fossilization.

If we take for granted that these determinig causes of fossilization, i.e. on the hand the idea of purpose and on the other the psychological and social dimension, it follows that a change both in purposes and psychological and social circunstances can revitalize the learning process and bring the learner closer to the target language. By way of example we could mention the possibility of getting a job in which the command of the foreign language is more demanding or else simply ending up marrying a speaker of the target language. This fact has also been pointed out by Hyltenstam (1985) who questions what we have just suggested, that is, whether a fossilized area can be made to develop at a later point in time.

As far as I know there is no empirical evidence that enables a conclusive answer to this question.

Persistance and eradication of fossilized errors

However, it is important to mention that many authors such as John (1980), Selinker (1972), Mukattash (1986) and Plann (1976) emphasize the persistance of fossilized errors in interlanguage that are never really eradicated for most second language learners to quote Selinker. On the other hand, John (1980) talks about some "critical barriers" -whose origin he does not explain- which the learners possibly never surmount in the learning process.

Mukattash (1986) adds to this question the idea that there are errors, probably those derived from the mother tongue that are more likely to get fossilized.

In any case, nothing is said about the nature of potencial changes that could take place.

Plann (1976),on the contrary, considers that this is something to take into account. She does so in the context of a immersion programme. This writer considers that there are some fossilized forms which may be very difficult to eradicate, unless the immersion programme can be supplemented with increased contact with native-Spanish-speaking peers.

Accordingly, as we have been maintaining so far any kind of change in the individual's situation can bring about an important impulse in his or her fossilized system.

The notion of persistance of fossilized forms is reinforced by Selinker's hypothesis of the reappearance of fossilized linguistic structures which were thought to be eradicated. He refers to this phenomenon as back-sliding and he mentions some situations, such as a state of excitement or curiously enough extreme relaxation, in which it can be observed.

As we see, once again, factors seem to play a fundamental role in this process.

Prediction and remedial treatment

Finally, it can be useful, as far as teaching is concerned, to consider if fossilization can be somehow predicted. For instance, in the field of errors, Mukattash

(1986) asserts that if research could prove that certain error types are insusceptible to de-fossilization, then the time and effort expended in the correction of such errors could be more fruitfully employed in the teaching of new material. Fair enough. The problem is that so far, this task of prediction has proved to be impossible. Obviously more research is needed in this area.

To recapitulate these last considerations, we would like to emphasize the following facts about fossilization:

-it can be conscious,

-it is not experienced as a problem by individuals,

-it is deeply connected to the idea of purpose,

-it can be determined by personal characteristics, such as cognitive style or risk-taking,

-it is deeply related to psycho-social factors, such as psychological and social distance and motivation,

-it is changeable, i.e. it can be modified if purposes and factors vary,

-it is difficult to eradicate,

-and finally, it is unpredictable.

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